

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

August 17, 2015

Mr. Dana Bayuk
Oregon Department of Environmental Quality
Northwest Region, Portland Office
Portland Harbor Section
2020 SW Fourth Avenue, Suite 400
Portland Oregon 97201-4987

HAI Project No. 2708
DEQ ECSI File No. 84

**SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and
7200 NW Front Avenue, Portland, Oregon**

Dear Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report to summarize Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of July 2015. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

1.0 Communications and Document Submittals

A meeting with representatives of DEQ, EPA, and NW Natural was conducted on July 1, 2015 to discuss figures intended to document Phase 2 HC&C system testing.

In correspondence dated July 1, 2015 (Rob Ede to Dana Bayuk), HAI, on behalf of NW Natural, notified DEQ of the anticipated schedule for completion of test pitting activities in effort to discern the location of the former industrial water supply well at the site.

In correspondence dated July 9, 2015 and transmitted on July 13, 2015 (Bob Wyatt to Dana Bayuk), NW Natural provided acceptance, with clarifications, of DEQ's May 22, 2015 final comments on the Revised Gasco Site HERA Report. DEQ concurred with NW Natural's clarifications in correspondence dated July 17, 2015 (Dana Bayuk to Bob Wyatt).

In correspondence dated July 17, 2015 (John Renda to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted documentation related to Aqua Gard CO₂ injections completed as part of operation and maintenance activities at groundwater extraction wells prior to initiation of Phase 2 HC&C system testing.

In correspondence dated July 17, 2015 (John Renda to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted the *Groundwater Quality Monitoring Data Report, NW Natural Gasco Site*, dated July 17, 2015. This report includes proposed modifications to the integrated monitoring scope and schedule.

In correspondence dated July 24, 2015 (Dana Bayuk to John Renda), DEQ summarized a July 16, 2015 teleconference in which approval to operate the HC&C system through May 2016 was provided. The approval was based on review of Figures from the first 30 days (through June 14, 2015) of the 60-day HC&C Phase 2 testing.

A meeting with representatives of NW Natural and DEQ was conducted on July 27, 2015 to discuss expectations and initiate NW Natural's preparation of the upland Gasco Site Feasibility Study (FS). In correspondence of the same data (Halah Voges to Dana Bayuk) Anchor QEA provided DEQ with the Draft FS Outline for discussion purposes during this meeting.

2.0 Field Work

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during July 2015. The system recovered approximately 42 gallons of fluids, primarily DNAPL, in July.

Tasks related to optimization and maintenance of the HC&C system and the groundwater treatment system were conducted in July 2015.

Test pitting activities were completed on July 10, 2015 at previously identified areas of interest in order to determine if the location of the former MGP-era bedrock water supply well can be ascertained. As verbally reported to DEQ at the completion of these activities, no evidence of a buried bedrock supply well was identified during these activities.

An interim 60-day Phase 2 HC&C test began during May and continued through July 14, 2015.

Operation of the HC&C system was re-initiated on July 21, 2015. DEQ approved long term operation of the HC&C system over the next nine months using Phase 2 testing parameters.

Baseline DNAPL removal as needed to maintain at levels below the top of the well sumps was conducted by Anchor QEA during July 2015 in the following wells near the river shoreline.

- MW-16-45
- MW-26U
- MW-27U
- MW-38U
- MW-PW-2L

On March 31, 2014 NW Natural discontinued routine discharges of treated groundwater to the sanitary sewer (Industrial Wastewater Discharge Permit 500.022). During July 2015 all water was directed to NW Natural's on-site wastewater treatment plant and discharged to the Willamette River consistent with National Pollutant Discharge Elimination System (NPDES) Permit No. 103061 (expires August 31, 2018). Results from NW Natural's NPDES effluent sampling are provided to DEQ in Discharge Monitoring Reports that are submitted on a monthly basis in accordance with the permit. A total of 9,012,198 gallons of treated water were discharged under the NPDES permit during July.

3.0 Anticipated Activities August and September 2015

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during August and September 2015 to discuss ongoing project tasks.

The *HC&C Model Calibration and Validation Report* is in preparation for submittal to DEQ after agreements with the agency are reached related to model calibration.

Long-term HC&C system operation, initiated during July 2015 and initially approved for nine months, will continue through indicated timeframe.

A Contaminated Materials Management Plan is being prepared for submittal during the early September timeframe.

The *Groundwater Treatment System Operations and Maintenance Manual*, prepared by Severson Environmental Services, Inc., dated May 2015 is being updated based on feedback provided by DEQ and DOJ and will be resubmitted during the early September timeframe.

Initiation of supplemental Doane Creek investigation activities will occur once access agreements with the off-site property owners (Portland & Western Railroad and Burlington Northern & Santa Fe Railway Company) are received, which is anticipated to occur in mid-September. The application and fee payments to BNSF for access agreement initiation was transmitted during August (submitted August 11, 2015).

The next integrated groundwater monitoring event is scheduled to occur in September 2015. DEQ approval or comments on proposed changes to the integrated monitoring plan (Anchor QEA, July 17, 2015) are needed soon in order to conduct the September monitoring event.

The following reports and work plans for the Site have been submitted to DEQ through the date of this progress report. Unless otherwise noted, NW Natural has not received DEQ comments on these documents.

- *Fill WBZ Trench Design Evaluation Report, Gasco/Siltronic*, prepared by Anchor QEA, dated April 8, 2015.
- *Hydraulic Control and Containment (HC&C) System Operation and Maintenance (O&M) Manual*, prepared by Anchor QEA, dated May 1, 2015
- *HC&C Capture Performance and Monitoring Plan (PMP)*, prepared by Anchor QEA, dated May 1, 2015.
- *Groundwater Quality Monitoring Data Report, NW Natural Gasco Site*, dated July 17, 2015. This report includes proposed modifications to the integrated monitoring schedule.

Should you have any questions, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Rob Ede", with a stylized flourish at the end.

Rob Ede, R.G.
Principal

robe@hahnenv.com

Cc: Mr. Bob Wyatt, NW Natural (electronic only)
Ms. Patty Dost, Pearl Legal Group PC (electronic only)
Ms. Rachel Melissa, Pearl Legal Group PC (electronic only)
Ms. Sarah Riddle, Pearl Legal Group PC (electronic only)
Mr. Carl Stivers, Anchor QEA, L.L.C. (electronic only)
Mr. John Edwards, Anchor QEA, L.L.C. (electronic only)
Mr. Ben Hung, Anchor QEA, L.L.C. (electronic only)
Mr. Ryan Barth, Anchor QEA, L.L.C. (electronic only)
Ms. Halah Voges, Anchor QEA, L.L.C., (electronic only)
Mr. Henning Larsen, DEQ NW Region (electronic only)
Mr. Keith Johnson, DEQ NW Region (electronic only)
Mr. Myron Burr, Siltronic Corporation (electronic only)
Ms. Kristine Koch, Region 10 EPA (electronic only)
Mr. Sean Sheldrake, Region 10 EPA (electronic only)
Mr. Rene Fuentes, Region 10 EPA (electronic only)
Mr. Lance Peterson, CDM, Inc. (electronic only)